

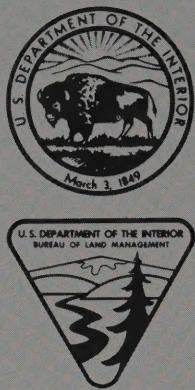
# Your Public Lands

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Summer 1984



**FIFTY YEARS OF RANGELAND MANAGEMENT**



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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# Your Public Lands

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Cover: The Trail Boss, by western artist Charles M. Russell, is the official emblem of The Society for Range Management, 2760 West Fifth Avenue, Denver, Colorado 80204.

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# Establishing Management Under the Taylor Grazing Act

The following excerpts are from a talk at Montana State College on January 8, 1962, by Farrington R. Carpenter, of Hayden, Colorado. "Ferry" Carpenter was appointed director of the Division of Grazing in the Department of the Interior on September 7, 1934, following enactment of the Taylor Grazing Act on June 28, 1934. He served until 1938. At first, 6 employees from the General Land Office, 8 from the Division of Investigations, and 21 from the Geological Survey were detailed to the new Division of Grazing. By June 30, 1939, there were 167 employees, and there were 53 grazing districts.

The Grazing Service succeeded the Division of Grazing in 1939. Then on July 16, 1946, the Bureau of Land Management was formed when the Grazing Service and the General Land Office were joined.

Carpenter graduated from

Princeton and received a law degree from Harvard, but talked in the language of the West.

Here is Ferry Carpenter's account, in his own words, of how advisory boards were established.

\* \* \*

The Federal Government started in to use the public land to get money by selling it. The main idea at that time was to dispose of it. It was no good. It paid no taxes—get rid of it. And then they found that they couldn't get much money for it. The people that wanted free land were not wealthy people. They were the hard-up settlers that had been closed out by the sheriff and were trying to get a new start. The only way they could do so was to enact the Homestead Act. The settlers went out and settled up this country where you and I live. But

they only settled up a part of it. In Nevada, they only had one acre out of 50 and most of that you couldn't make a living on. So the Congress of the United States went on with the policy of disposition of the public lands. They started in with a homestead of 160 acres and then when they got out here west of the 100th meridian, the folks couldn't make a living out of 160 acres so they passed in 1909 what they called the Enlarged Homestead Act. You could get 320 for dry farming and putting an eighth of it under cultivation. When the homesteaders came to the Rocky Mountains and the areas between the Cascades, Sierra Nevadas and the Rockies in what we call the Intermountain Basin, it was too dry to make it on 320. So then on the last day of the year of 1916, they passed the Stock Raising Homestead Act. You could get a



Many improvements have been made in rangeland drills used to rehabilitate areas depleted by wildfire or other causes. Hundreds of acres can be seeded each day.



One-row drills, adapted for grass seed and pushed by hand were tried in the early days of rangeland management to restore productivity.



Marvin Klemme, third from the right, was the first regional grazier when the Oregon region was established in 1936. Now 83, Klemme operates a family ranch in Oklahoma. He is the only surviving regional grazier out of 20 that were appointed soon after passage of the Taylor Grazing Act. Klemme established his regional office in a Burns hotel room. Serving with him in 1937 in Oregon were the men pictured above, left to right: Paul Stafford, Charles Parcell, G.L. Hankins, Paul Crouter, Clarence Gulviston, Martin Galt, Maurice Zimmerman, Marvin Klemme, Warren Sholes, and Roland Davidson.

section—640 acres. And still the homesteaders couldn't make a living on this land. Then grazing started on the public domain. These were mostly sheep people who were nomads. They'd get a loan on a bunch of sheep and start off with an old battered up jalopy and wander all over. There was no regulation of the public domain. The reason there wasn't is that Congress was embarked on a policy of disposition. Now they didn't have to regulate the pasture lands in the East because in a little while, somebody farmed or homesteaded and so the land disappeared from public ownership. So they had no problem there and the majority of our legislators come from that side of the meridian. They didn't understand the western conditions. Besides it was the historical thing to do. They kept on with the policy of disposition of the land.

#### Conflicting Interests

It wasn't until the year 1934 that the western states faced a crisis and the crisis came on pretty much in the conflict between the cattle and sheep interests. We had no way of keeping a sheep man off the cow range. He could move in and settle around the water with all his dogs and his wagon and the cows wouldn't go near it. The cattlemen had to move out. Well, they didn't move out

peaceably and so we had range wars all over. The law officers said nothing and nearly every western state tried some kind of law to regulate range use. We had a law in Colorado whereby we could go to court and have an adjudication of our ranges for cattle and sheep. But as soon as we did it, some sheep man would get his herd to going and file a homestead in the middle of our land. We couldn't do anything about it because the Federal Government gave him the 640 under the homestead laws. So the states were unable to handle the problem. That was the origin of the Taylor Grazing Act.

#### Taylor Grazing Act

The Act was a tremendous turn in policy whereby the Federal Government said, "No longer will we try to dispose of this land. Nobody wants it because it's too dry and too worthless to pay taxes on. We're going to do three things with it: (1) we'll sell the isolated tracts; (2) we'll lease the little pieces that won't fall naturally into a grazing district; and (3) then we'll form grazing districts." This Act was a tremendous surprise and was very antagonistically received in the West. Utah was the only State that welcomed a cooperative use of the public land because the Utah people by training, by religion and by practice are cooperatively minded to the

degree beyond any other state. But the Act had an example in something that had been done in the State of Montana. There was a cooperative effort by stockmen in Montana who took State land, private land, and Government land and formed a cooperative association and administered it under partial State rule and in a cooperative way. It was quite a remarkable thing.

#### Grazing Districts

The Taylor Grazing Act said the government would sell the isolated tracts, lease tracts that were not big enough to go into districts and then would set up grazing districts for the rest of the public domain. That's about all they said. They wrote finis to it, passed it, Roosevelt signed it and there it was. The Secretary of the Interior, Mr. Ickes, was an eastern man. He didn't know which end of a cow got up first. He didn't know anything about the West and he didn't know what to do with the Taylor Grazing Act. Through a series of circumstances that I won't take time to tell about, they put the crown on me and said, "Go out there and set those grazing districts up." There were no appropriations for it. They loaned me a few fellows out of the Geological Survey and some out of the Division of Investigations and a couple of geodetic



Members of the first Arizona Advisory Board were photographed in 1935 by Marvin Klemme, who at that time was an assistant regional grazier in the Department of the Interior's Division of Grazing. Front row, left to right: Charles C. Anderson, Alex Findley, John C. Miller, Ensign Griffith, Lindau Foremaster, and Cecil Pugh. Back row, left to right: Charles Alcorn, Earl A. Childers, Rudger C. Atkin, Fred C. Heaton, Royal B. Woolley, Wally B. Mathis, Harold Reber, Le Roy Cox, John F. Findley, John H. Schmutz, Clarence Lamareaux, Lloyd Chamberlain, and Daniel Judd. Scott Brown was absent.

surveyors—17 men all together and we started out. There were about 142 million acres of land and that's a lot of land. So when they gave me the job, I went to the General Land Office. Now the General Land Office is older than the Department of the Interior. They had been operating 175 years and you'd think they would have known where the lands were. I went to the Commissioner of the General Land Office, only to find out they had no maps that would tell me where the public lands were. Why? Every day people were filing homesteads, buying isolated tracts and taking up timber applications. States were trading state land for other land called lieu land. The Forest Service was expanding its boundaries and taking more. There were 22 Land Offices in the western States and every day, every minute, every hour somebody comes in and takes a piece of land. How could there be a map of it? So I didn't know where the land was. There wasn't anybody in the State of Montana who knew where the state lands were.

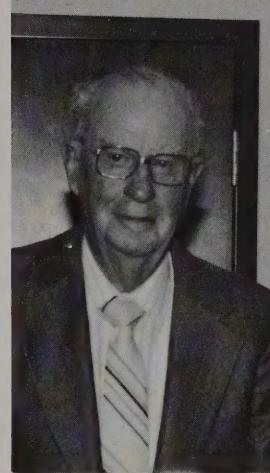
I knew there was only one way to find out. So I put up notices in all these public land states that we were going to call meetings.

Anybody that wanted to get a bite of this public grazing land had better be at the meeting because we were going to hand it out. Well, you don't have to say that twice. It's just like a free meal at the church.

So here was the job, gentlemen, and here were 142 million acres of land. Where was it and how were we going to put it under supervision and get a fee for it? Now you know, nobody likes to pay a fee or a tax. We would go out there and the stockmen would ask, "What kind of a fee? We've always grazed for nothing. My father came to this country in a covered wagon and he fought his way out and settled a little ranch here and improved it." He's used all the public land that lies adjacent to his place. That's as good as owning it and now you're coming out here and telling us we've got to pay eight cents a head a month for a fee. How come?"

#### Grazing Fees

Well, there wasn't any explaining to them. I said, "Boys, the Congress has let you have it as long as you could for nothing and now they've got a collar and you've got to stick your head



The only surviving members of the first Arizona Advisory Board are Rudger C. Atkin, 81, left, and Cecil Pugh, 84.



through it. If you don't stick your head through it, another fellow will stick his head through it and we'll please him and let him have the range." You couldn't go out to the range country and ask these fellows to be nice citizens and be cooperative and show a Christian-like attitude. They had no intention of showing a Christian-like attitude. They had the land and they were going to keep it and they weren't going to pay for it.

It was a rough old battle and the way that it was handled at the meetings was this: First of all we got the amount of public land that was in each state; then we got the township tracts from the local District Land Offices. These township tracts had the private land marked off.

Everybody showed up. All of the cowboys were in this section, all the sheepherders were over here. They wouldn't speak to each other. Each wanted to get everything there was and push the other fellow off. That was the game and we knew it. We called the meeting to order and said "Well boys, the good old days are over and there's no use crying about it. Congress is going to set these grazing districts up. You're



*Farrington R. Carpenter was Director of the Department of the Interior's Division of Grazing from 1934 to 1938.*

going to have to get a permit to use them. You're going to have to pay a fee for it. Now the question is, how are we going to do it? Are you going to have a smart guy come here to run it, and write all your rules and regulations? . . . Do you want that or do you boys want to help do this?"

#### **Wanted To Help**

Well, of course, they wanted to help do it, if they could help themselves a little bit. So I said, "Well I'll tell you what we'll do. We'll explain the set-up. We'll answer questions. At the close of the meetings you cowboys go over here and you'll elect 10 advisors and you sheepherders go over there and you'll elect 10 advisors. I'm not going to let either one of you have a downhill pull on the other. I'll leave a Federal man here in this state to work with your advisors and we'll set up the first provisional rules and regulations and issue permits." And so they did just that.

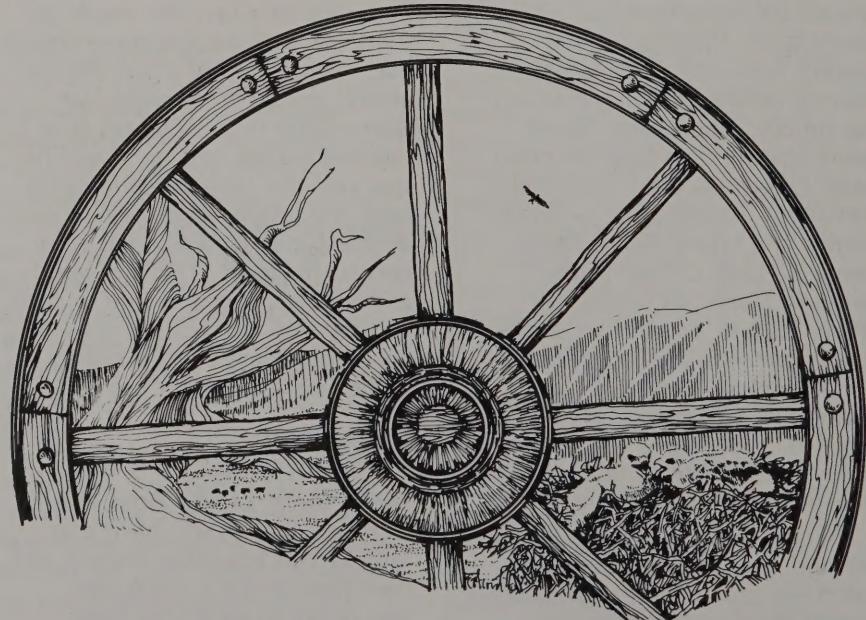
Then I said, "Gentlemen, the first thing to do is to mark out

grazing district boundaries (I had a big map of their corner of the state). I want you fellows who know the natural grazing boundaries to come up here with a piece of chalk and mark out these grazing districts." The advisors did just that.

Now, to go back to our first meeting of advisors, I set the first meeting at Grand Junction, Colorado. The chairmen of each group said they didn't care to sit down in the room with the other guys. So at noon I got the upstairs of the Fire Department in Rifle, Colorado for the sheep boys and a room at the Winchester Hotel in Rifle for the cowboys. I took my office in the Chamber of Commerce. The sheep boys would come over and they'd say they thought one year's use of the range should give a prior right. The cowboys sent somebody over and they said they thought anybody that used this range 20 years ago had a better right. The woolies weren't there 20 years ago, so they had no right. After a lot of traveling between my office and the two meeting rooms by fellows from the two groups I finally said, "you just can't get along that way."

#### **Amalgamation**

So I went to a restaurant and got a table for 21 people. I took the names of the 10 cowboys and the 10 sheepherders, and, by using placecards, I fixed it so that the sheepherders and cowboys would sit next to each other. I invited them as my guests to the dinner that night. They walked in kind of sheepishly and sat down. Each one found that the fellow next to him used a fork, too, and was half-way human. That was the last of the separation of those boys. I told them they couldn't operate individually. They were going to draw lines for livestock use and the Federal Government was going to police it. I made it clear that if we gave an allotment to cows, the sheep boys didn't need to think they could fudge over on it the way they had been fudging over on our private land. If it was sheep territory we weren't going to let a cow wander over it. So we got them together. That was the start of the amalgamation of the two livestock industries to handle the grazing districts.



# Managing The Rangelands in 1984

By Jackie Olson

**M**anaging the natural resources on more than 500,000 acres along Montana's high-line is no small task. But Don Ryan, manager of the Bureau of Land Management's (BLM) Havre Resource Area, sees himself as a people manager.

"My staff manages the resources," Ryan says. "I manage the staff."

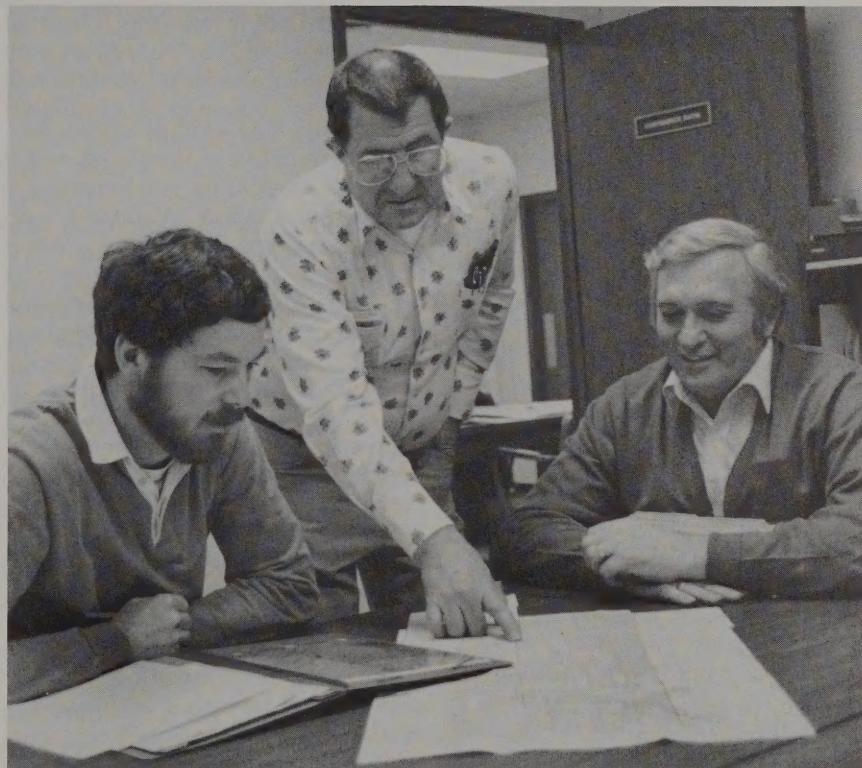
Gazing into the 90-mile vista from Reeser Reservoir in northwestern Blaine County, Ryan reflects on the area he's managed for the last eight years.

"High-line" refers to the route of the Great Northern Railway, which crossed the plains of northern Montana. It's an area steeped in history—inhabited first by buffalo and plains Indians, later by homesteaders.

Nez Perce Chief Joseph surrendered to the U.S. Army near here in 1877, after a 1,800-mile journey from Oregon. In their attempt to move to Canada to avoid conflict with white settlers, the Nez Perce fought five battles in 75 days—winning 3, tying 1, and losing 1. Chief Joseph surrendered his 100 warriors, 300 women and children and 700 horses just 40 miles short of the Canadian border.

## Abandoned Homesteads

Today, the high-line area that Ryan manages is dotted with abandoned homesteads. Cold winds blow unchecked in winter, plunging temperatures and earning



*Havre Resource Area Manager Don Ryan, standing, discusses a land exchange proposed by Bon Inman, a Chinook, Montana, businessman, right, and BLM Realty Specialist Paul Brink, left.*

for the high-line its reputation as the Nation's ice box.

But there is stark beauty in the land's harsh extremes—the northern half of the resource area is characterized by broad, glaciated plains and shallow valleys. The southern half, bounded by the Milk and Missouri Rivers, is rough, river-break country.

Managing the people who manage the resources of this unusual area is what Don Ryan's job is all about.

Ryan describes his job as reactionary—not in the negative sense, but in the sense that the area manager has to remain flexible and react to changing conditions. No two days in the working



*Managing livestock grazing is a major responsibility of the Havre Resource Area, but also important is coordinating all rangeland resources—including minerals, wildlife habitat, recreational opportunities, and others—plus improving the land pattern, mainly through exchanges.*

life of an area manager are the same. "Some days, the phone will ring off the hook and everyone is demanding my time. Other days, people would talk to my staff. Of course," he says with a grin, "the mad ones ALWAYS want to talk to me."

One area where Ryan has to remain flexible is in livestock management. "We may be seeing some major changes in the next few years. The emphasis in the past has been on grazing, but the major private land use is changing to wheat farming. The cow market has been bad, and ranchers have cut back on the number of livestock they graze. Drought is another condition that forces you to remain flexible," Ryan noted. "Our soil scientist has run studies for the last several years, and soil moisture is way below normal. Drought isn't usually as bad along the high-line as it can be in other areas because spring storms usually come later, when moisture is needed more. But given the current soil moisture, a really dry spring could mean some adjustments in management."

"With all this people management," Ryan commented a little wistfully, "I don't get out on the land as often as I used to. Maybe that's not so bad, but I guess I kind of miss it."

That wasn't always the case.

Ryan worked as a range conservationist with BLM in Wyoming and Utah before coming to Montana. A native of Rawlins, Wyoming, BLM blood runs in his veins. "My mother was the district clerk in the Rawlins office from the time it opened in 1947 until she retired in 1972," Ryan said.

He graduated from the University of Wyoming with a B.S. degree in education. "I like to tell people that and watch their expressions change," Ryan smiled. "I also completed credits in the range conservation program and landed my first job with BLM as a range conservationist in the Worland Office in 1961."

"In those days, range conservationists were versatile," Ryan said, "I also did some engineering work, surveyed reservoirs and fences, ran contracts. . ." But all that changed when Ryan moved to Montana's high-line in 1975 as an area manager.

### Balancing Land Uses

Balancing and coordinating competing land uses is a major part of Ryan's job. "Multiple use management through an interdisciplinary process may be more appropriately called conflict management, because you never get 100 percent agreement from everyone. An area manager has to learn to negotiate and mitigate.

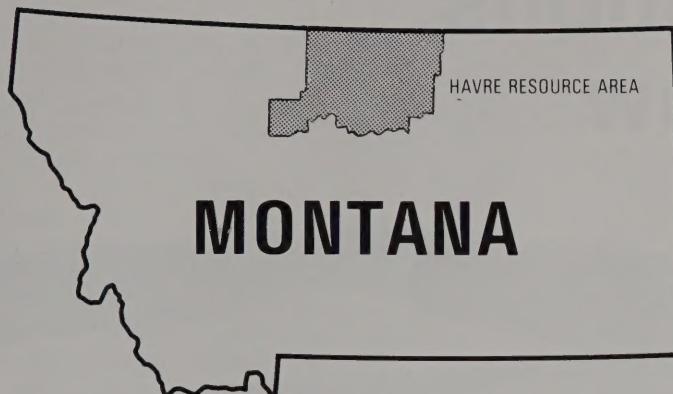
That's challenging!"

The Havre Resource Area has nearly 400 grazing permittees. Although the focus is on range, that doesn't mean other resources are neglected. The Havre Resource Area is on the western edge of the central flyway for ducks and geese. Three years ago, the Resource Area processed about 65 applications for permits to drill for natural gas. Energy activity has declined, however; the Area has only received three such applications this year. The Resource Area also plays a major role in BLM's Montana land adjustment program. Five major land exchanges are planned for the area this year.

Coordinating these various uses isn't easy. "I don't think there are conflicts unique to the high-line or Havre; I think these resource conflicts are pretty much universal," Ryan said. "The specifics may vary, but the concerns remain the same."

### Interdisciplinary

One example of interdisciplinary coordination is being applied in northern Blaine County. "Club moss is growing in a certain area, choking out the desirable forage for livestock," Ryan explained. "The range conservationists want to rehabilitate the range to make it suitable for grazing again, but



the wildlife biologists are concerned about the techniques that will be used, since the area also provides critical winter habitat for antelope. We have to reach agreement among ourselves before we can accomplish range rehabilitation without impairing the wildlife habitat."

When natural gas drilling activity peaked several years ago, the location of roads to the drill sites caused concern among the archaeologists and wildlife biologists. High-line archaeology contains a lot of tipi rings (stones in circle formation that were used to anchor tipis) and drive lines (long rows of rocks used by American Indians to drive buffalo or other wild game). "We had to make certain that the roads avoided such archaeological sites," Ryan said.

Some roads involved important wildlife habitat. "Almost every road we permitted stipulated that if the well was not a producer, the road would be rehabilitated and reseeded," Ryan said. "Sometimes we also stipulated the road could not be used during certain times of the year when wildlife used the area."

#### Land Pattern

Coordination is probably most important in the lands and realty program. "Land exchanges are something I've always supported. The three counties that form the Havre Resource Area contain about 3.5 million acres. BLM administers about 15 percent of that land, much of it in isolated 40-

80-acre parcels," Ryan said. "Consolidating our scattered land pattern is just one objective, though. We try to look beyond that and see what other resource programs can benefit."

This year, the Havre Resource Area expects to exchange between 16,000 and 19,000 acres of land to improve its land pattern. Some lands to be acquired will help consolidate grazing allotments. Others include historical and archaeological sites, part of the Nez Perce Trail, and important wildlife habitat. An area to be acquired in one exchange contains natural "potholes" that provide excellent habitat for high-line waterfowl.

"These natural potholes are becoming increasingly important along the high-line because more and more of the private land is being plowed," Ryan explained. "In northern Hill and Blaine counties, the only acres that aren't plowed are BLM-administered lands, and those are mostly L.U. lands." L.U. lands are lands acquired by the Federal Government under the Bankhead-Jones Farm Tenant Act of 1937. Known as land utilization projects, these lands were incapable of producing sufficient income to support the family of each farm owner. The Act relocated the owner and family and retired the land from agricultural use.

"The plow-out issue is something else that needs to be considered in land exchanges," Ryan said. Ryan and his staff addressed the issue in mapping out retention

zones. "We took a good, hard, interdisciplinary look at the lands to be retained in public ownership," Ryan said.

"We've had a lot of public support for the program, too. The retention areas help clarify the goals for the public," Ryan explained. "The county commissioners have been supportive. They see the advantages of exchanging lands and they're aware of the problems with managing scattered lands. We work closely with the Montana Department of Fish, Wildlife and Parks on individual exchanges to make sure the goals of the exchange are compatible with the State's objectives."

#### Management Plans

Ryan thinks resource management plans are a good way to facilitate the coordination of land uses. Plans lay the groundwork for the Resource Area," Ryan said. "You have to have a base on which to make your management decisions, and a good, well-done resource management plan gives you that base."

Currently, older land use plans are being updated to reflect changed situations.

With his eight years' experience balancing competing land uses and maintaining flexibility, Ryan now must devote considerable time to developing new resource management plans while guiding his staff in continuing day-to-day management of the resources.

"I enjoy people management as much as I enjoyed working in the range program, but at times it does become frustrating," Ryan admits.

How does he cope with frustrations?

He goes to karate class. "I'm not a threat to anybody," he admitted, "but it sure is a good way to get rid of tension!" ▽

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Jackie Olson is a public affairs specialist in BLM's Montana State Office, Billings.

# Range Conditions, Then and Now



*Better grazing management has resulted in improved range conditions.*

**M**ost range managers agree that, in general, the condition of the public rangelands has substantially improved during the past 50 years.

This improvement is partly the result of a decrease in livestock numbers from the excessive numbers using public rangelands prior to passage of the Taylor Grazing Act of 1934. Additionally, the improvement in rangeland condition can be attributed to conservation and development measures, better livestock management practices, and cooperative efforts by BLM, livestock operators, and other rangeland users.

## Four Assessments

Four general assessments of rangeland condition since 1934 document this improvement.

In 1936, Senate Document 199 recorded a report by the Secretary of Agriculture stating that 95 percent of the public domain rangelands had declined in condi-

tion since 1900. The report concluded that it would take 100 years to restore the rangelands to their original productivity. In the 1936 report, lands were classified by degree of depletion. Only 1.5 percent were considered to be moderately depleted, while 14.3 percent were materially depleted, 47.9 percent were severely depleted, and 36.3 percent were extremely depleted.

In 1969, a report prepared for the Public Land Law Review Commission—based on a national inventory in 1966 by Pacific Consultants—classified 19 percent of the public rangelands as being in excellent and good condition, 52 percent in fair condition, and 29 percent in poor condition.

In 1975, the Bureau of Land Management (BLM) prepared a report of range conditions prevailing then. It was based on forage production for livestock only, without regard to needs for other purposes or the production potential of each site. The 1975 report

indicated that 17 percent of BLM rangelands were in good or better condition, 50 percent were in fair condition, and 33 percent were in poor condition.

Since 1975, BLM has prepared grazing environmental impact statements for about two-thirds of the 170 million acres of rangelands. Baseline soil and vegetation inventories conducted in connection with those statements have provided a basis for new estimates of range condition. Current condition classes are based on the kinds and proportions of existing plants compared to the potential plant communities for all ecological sites. The resulting ratings indicate that 5

percent of BLM rangelands are in excellent condition, 31 percent are in good condition, 42 percent are in fair condition, and 18 percent are in poor condition.

#### Comparisons

A direct comparison of the ratings made during the past half century is not possible, because the methods of rating differed. However, by assuming that the 1936 depletion classes were roughly equivalent to today's concept of condition classes, the following comparison illustrates the gradual improvement in range conditions:

Year	Percent by Condition Class			
	Excellent	Good	Fair	Poor
1936	1.5	14.3	47.9	36.3
1966	2.2	16.7	51.6	29.5
1975	2.0	15.0	50.0	33.0
1984	5.0	31.00	42.0	18.0

These figures do not reveal all the progress that has been made. Ecological condition classes only describe the condition of the vegetation in relation to the potential natural vegetation for that site. These classes do not necessarily indicate how well the current vegetation meets management objectives for a site.

BLM is developing a resource value rating system which will express rangeland condition in relation to multiple-use management objectives.



*Ranchers of this generation and the next value the sustained productivity of BLM rangelands.*

# THE VALE PROJECT

## A successful experiment in rangeland management and cooperation

By Lee Keesling



In the 1960's, under the authority of the Taylor Grazing Act, the Bureau of Land Management worked with ranchers to plan one of the largest rangeland recovery projects in the world—the Vale Project—to rehabilitate 4.5 million acres in Malheur County in southeastern Oregon. The main goal was to test new concepts to restore the productivity of a large area of depleted rangeland. The early years of unrestricted grazing by large herds of cattle, sheep and horses severely damaged once productive rangelands. Sagebrush and weeds took over where native bunchgrass once grew. Precious desert topsoil eroded away. In time, the land could provide forage for only a fraction of the livestock it had supported when grazing began.

### Improve Conditions

Max Lieurance, Vale District Manager from 1959 to 1971 dur-

ing the planning and most of the implementation of the Vale Project, said "The idea was to greatly improve range conditions on part of the land and, using that acreage for alternative grazing areas, improve vegetation on the remaining land through planned periods of rest from grazing pressure." A second objective of the project was to make the lessons learned available for land rehabilitation programs elsewhere. "While the Vale Project provided tremendous opportunities for success, we also learned from failures. We found out what wouldn't work as well as what could."

Improvements under the Vale Project began in 1962 and continued until 1973. During this period Congress appropriated \$10.5 million to fund the program and users contributed substantially through labor and management practices.

One-quarter million acres of sagebrush and weeds were seeded with crested wheatgrass, a plant native to Siberia that grows well in this area. The seedlings and native range were then organized into pastures with 2,000 miles of fencing to control grazing. Extensive water projects including 28 deep wells and water storage tanks, 440 miles of pipelines, and 1,000 reservoirs and springs were developed to improve livestock distribution and wildlife habitat. Special plantings were made on 58,000 acres to further improve deer habitat in critical winter areas.

### Flexibility

The combination of seedings, fences and water developments gave managers considerable flexibility while the native rangelands were rested for periods each season. Over several years the native grasses regained strength

and reproduced, while the seedlings provided forage to offset otherwise needed livestock reductions.

Lieurance said, "The on-the-ground improvements provided the setting for intensive management to take place. By far the greatest range improvement resulted from better management—not the projects themselves."

The rangelands of southeastern Oregon recovered dramatically. Native grasses responded to management more quickly than expected, and are continuing to improve. For example, the amount of land in excellent and good condition increased from one percent to 22 percent of the total range between 1961 and 1983. Erosion decreased. New water sources appeared. The land's capacity to feed grazing animals on a sustained yield basis nearly doubled since the Vale Project began.

The Vale Project provided benefits to range users across the board. Fearn Parker, current Vale District Manager, said, "Recent range surveys and planning updates show an improved condition on the Vale Project lands and surplus forage in a few areas. Today 220 livestock operators graze 82,000 cattle and 6,000 sheep on the project area."

#### Wildlife Benefits

Parker said that many wildlife species thrive because of the im-

*Severe grazing resulted in monocultures of big sagebrush on fertile soils, with little forage remaining. Brush control and revegetation restored production.*



proved condition of native habitat and the expanded distribution of water. Forty-six thousand deer, 3,500 pronghorn antelope, and lesser numbers of bighorn sheep, elk, black bear, and cougar use the land.

Six herds of wild horses totaling 1,700 animals now roam these lands, and recreation visits have grown to 365,000 annually.

The cooperative efforts of livestock operators, the supportive public, and wildlife and land managers demonstrated that the condition and productivity of the Nation's rangelands can be successfully restored for many uses.

Lieurance said, "The Vale Project was a learning process not only for the professional range managers but for all involved. A new cooperative spirit, essential to get the job done, was generated. The project required a trust in each other and willingness to try new ideas without fear of

failure. None of us could have done it alone."

Bob Skinner, Jordan Valley rancher since before the Vale Project began, said, "It's difficult to paint a picture of the complete turnaround in cooperation between users and BLM. There were bad feelings before the project, but thanks to Max Lieurance and others we all pulled together to improve the condition and productivity of the range. What we accomplished was little short of a miracle."

In the future, the knowledge gained through the Vale Project will help to achieve even greater improvement and progress in Oregon and on other western rangelands.

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Lee Keesling was a public affairs specialist in BLM's Oregon State Office and now in the New Mexico State Office in Santa Fe.



*Plastic pipelines carry water from springs and wells to evenly distributed water troughs that serve both livestock and wildlife.*

# Milestones in Rangeland Management

## Contributions of the Society for Range Management



National conservation consciousness that led to passage of the Taylor Grazing Act in 1934 also initiated formation of the Society for Range Management and creation of the Bureau of Land Management.

In 1946, the Grazing Service and the General Land Office were consolidated to form the Bureau of Land Management. Also in 1946, a survey revealed that people concerned with rangeland resources were interested in forming an organization devoted to their concerns. The result was the American Society for Range Management (ASRM), which held its first meeting in Salt Lake City in 1948. The name subsequently was changed in 1970 to Society for Range Management (SRM) to denote the expanding regard for range management worldwide.

### Exchange of Ideas

The need for an organization of professional range managers was defined by the first president,

By Thane J. Johnson

Joseph F. Pehanec, in an article in the October 1948 issue of the Journal of Range Management. He said, "Plainly, something had to be done. Our profession had no status or unity. We needed a medium for exchange of ideas and unified expression of standards. We needed also a common meeting ground for the highly varied group in the field. But, it was clear that we needed to push ourselves because no one was going to do it for us."

The 1948 meeting, which was attended by 192 members, was exactly a half century after the first exploratory range management investigations were published. They were by Colville, Bentley, Williams, and Smith and were issued in 1898 as bulletins of the Divisions of Agronomy, Botany, and Forestry in the U.S. Department of Agriculture.

Half of the United States remained to be considered rangeland by 1948, and in 1984 the job of rangeland managers is still concerned with about 43 percent of the surface of the United States and, coincidentally, worldwide.

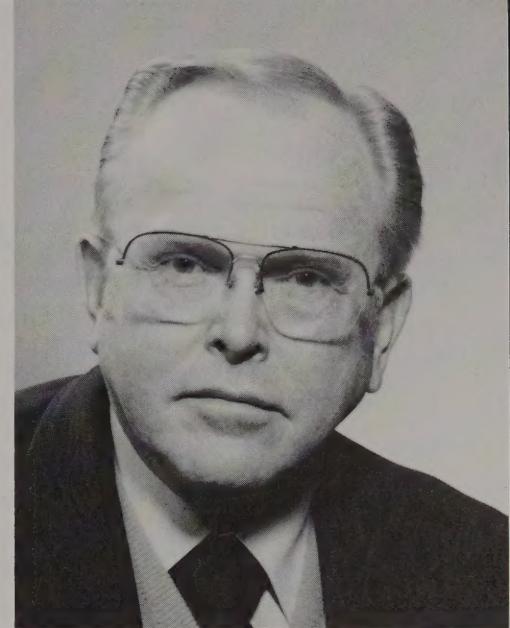
ASRM 1948 By-Laws stated: "The objectives of the Society shall be to foster advancement in the science and art of grazing land management, to promote progress in the conservation and greatest sustained use of forage and soil

resources, to stimulate discussion and understanding of scientific and practical range and pasture problems, to provide a medium for the exchange of ideas and facts among the Society members and with allied technologists, and to encourage professional improvement of its members. Persons shall be eligible for membership who are interested in or engaged in practicing range or pasture management or animal husbandry; administering grazing lands; or teaching, or conducting research, or engaged in extension activities in range or pasture management or related subjects."

### Changing Technology

The objectives of SRM in 1984 reflect changing technology and administrative requirements but still have the same basic purpose, recognizing that it is a non-profit association dedicated to management and conservation of worldwide rangeland resources.

Each year SRM has an annual meeting, usually in February, and a July or August meeting hosted by one or another of 20 sections of the Society. These meetings are to conduct the business of the association as well as to provide a forum for the presentation and exchange of ideas, facts and philosophies pertaining to the rangeland resources. Each section, geograph-



Bureau of Land Management range conservationists have achieved leadership in their profession. For example, Neil F. Morck is pictured at left analyzing the results of new techniques to improve range conditions in Montana a quarter-century ago. Today, he is BLM's Deputy Director for Lands and Renewable Resources, with far greater responsibilities.

ically located around the world, conducts similar meetings, tours and forums to foster management of the rangelands and resources at the local level. The primary concern of rangeland management is the vegetation of rangelands, and it is most often the case that proper management of this vegetation for livestock production also is proper management for other rangeland products and values. To add perspective to the concept of rangeland management, it should be understood that range science is the organized body of knowledge that forms the basis for the practice of rangeland management. Although unique in itself, range science is a synthesis of knowledge drawn from many disciplines.

#### Publications

To further the science and art of rangeland management, SRM has two publications which are issued in alternate months. These are *The Journal of Range Management*, which has been continuously published since October 1948, and *Rangelands*. Each of these magazines serves as a forum for the presentation and discussion of facts, ideas, and philosophies pertaining to rangelands and their resources. They also report rangeland uses, studies, and management practices. *The Journal of Range Management* is a

technical and scientific publication while *Rangelands* is a nontechnical counterpart germane to the broader field of rangeland management.

Other publications are issued from time to time. They cover a variety of scientific topics, plus bibliographies, historical documentations, and glossaries. They are available from the international office of the Society for Range Management, 2760 W. Fifth Avenue, Denver, CO 80204.

The Society for Range Management periodically sponsors or co-sponsors symposiums relating to rangeland management at many places around the world. One such symposium gaining popularity and acclaim is the International Rangeland Congress. The first such meeting was in Denver in 1978 and the second is this year at Adelaide, Australia. It will provide a month-long program of seminars and tours throughout the Australian countryside.

#### Rangeland Management

More than a century ago, Major John Wesley Powell, soldier, educator, explorer, naturalist, and one of the fathers of the conservation movement, recognized there was a kind of land not always suited for cultivation. Powell termed this other kind of land "native grazing land" and noted that its husbandry called for unique

management principles. It was from this early recognition that the science and art of rangeland management developed, but professional rangeland management as it is known today began a half-century ago, in the decade of the 1930s.

Out of the Dust Bowl and depression of that decade there emerged a group of scientists and land managers, men with diverse backgrounds and training, who had learned by hard experience what Powell had said earlier, "Range is a distinct kind of land." That decade, a half-century ago, marked a half-century since the drought and accompanying depression of the 1880's.

Recognition of the need for classification and management of the public lands left over after homesteading began during President U.S. Grant's tenure in 1874-1875. Legislative history records the numerous efforts that were introduced prior to culmination with the Taylor Grazing Act in 1934. Again drought and depression, along with time and experience, provided the needed incentives to initiate management of the remaining native grazing lands.

#### BLM Professionalism

BLM has taken an active role from the beginning of SRM's professional activities. Of the original

476 charter members of ASRM in January 1948, 46 were associated with BLM. The second of 13 directors of the Division of Grazing, Grazing Service, and BLM, Marion Clawson, was a charter member of ASRM. The first and only Director of the Division of Grazing, Farrington R. Carpenter, and the current Director of the Bureau of Land Management, Robert F. Burford, (member of the Washington, DC Section of SRM) were Colorado ranchers, as was Congressman Edward T. Taylor, sponsor of the Grazing Bill of 1934 that became known as the Taylor Grazing Act. Of the 37 SRM presidents to date, two BLM people have been president, Floyd D. Larson from Montana in 1954, and Floyd E. Kinsinger from Colorado in 1972. Kinsinger also served as SRM executive secretary 1979-1982. Over the years, several BLM people have served on the SRM board of directors: Milo H. Deming, 1949; Myrvin E. Noble, 1964; David G. Wilson, 1969; and Floyd E. Kinsinger, 1975.

Many BLM range managers have provided articles for the Journals, participated as section officers, and served on SRM committees. Today, BLM people continue to take an active and expanding role in SRM professional activities from the local level to international participation.

The versatility of professional range managers enables them to meet the ever changing challenges and opportunities of the times.

### First Year Members

These BLM people were members of the professional range management society in 1948, the first year of its existence:

J. Pratt Allred, Filmore  
W. James Anderson, Washington, DC  
James S. Andrews, Worland  
Max W. Bridge, Rawlins  
L. R. Brooks, Billings  
Evert L. Brown, Montrose  
Hugh M. Bryan, Salt Lake City  
Harold J. Burback, Salt Lake City



*Robert F. Burford, Director of the Bureau of Land Management and a member of the Society for Range Management, promotes cooperation in achieving improved rangeland conditions.*

William W. Campbell, Craig  
Marion Clawson, Washington, DC  
Howard Clegg, Tooele  
William F. Colt, Grand Junction  
Robert F. Copple, Reno  
Kenneth M. Curtis, Alamosa  
Howard R. Delano, Vale  
Milo H. Deming, Burns  
Ray Deschamps, Wshington, DC  
J. D. Dillard, Price  
Tom Dudley, Miles City  
M. H. Galt, Vale  
Kent J. Giles, Logan  
Warren J. Gray, Grand Junction  
Clifton M. Greenhalgh, Salt Lake City  
Richard S. Greenslet, San Francisco  
Boyd S. Hammond, Elko  
Harley M. Handy, Ibapha  
A. K. Hansen, Nephi  
Cecil L. Hase, Billings  
Douglas E. Henriques, Salt Lake City

Edward B. Hill, Lander  
Rufus T. Hiron, Grand Junction  
Harold H. Hochmuth, Logan  
E. E. House, Cedar City  
Dewane E. Jenson, Brigham City  
Horace E. Jones, Billings  
Nolan F. Keil, Billings  
Gerald M. Kerr, Washington, DC  
Dale H. Kinnaman, Monticello  
Floyd D. Larson, Billings  
Mark E. Lawrence, Shoshone  
Ben S. Markham, Salt Lake City  
William L. Matthews, Burley  
F. W. Merewether, Portland  
Warren G. Miller, Steamboat Springs  
H. Byron Mock, Salt Lake City  
Donald S. Mollitt, Kanab  
Albin D. Molohon, Billings  
L. T. Morgan, Pueblo  
R. E. Morgan, Billings  
Leon R. Nadeau, Portland  
Dale C. Naylor, Vernal  
Robert D. Nielson, Billings  
Myrvin E. Noble, Salt Lake City  
Earl J. Palmer, Salt Lake City  
J. R. Penny, Billings  
Ed Pierson, Albuquerque  
Evan L. Rasmussen, Salt Lake City  
Francis A. Riordan, Albuquerque  
Max E. Robinson, Tucson  
Richard L. Schaertle, Maryland  
Chesley P. Seely, Salt Lake City  
W. R. Sholes, Billings  
Albert H. Shunk, Billings  
Henry E. Snyder, Montrose  
T. Joseph Snyder, San Francisco  
Virgil E. Starr, Burns  
Rowland G. Thompson, Grand Junction  
S. H. Whetstone, Meeker  
William N. White, Salt Lake City  
David G. Wilson, College Station



*Thane J. Johnson is an SRM Life Member (Colorado and Utah sections); SRM Colorado Section Trail Boss Award Recipient, 1980; SRM Colorado Section President, 1978; past member of SRM, Nevada, Idaho and Pacific Northwest Sections; retired BLM range conservationist; and currently rangeland consultant and realtor in Lakewood, Colorado.*

# The Legendary Longhorn

By Don Mendenhall

Longhorns, those legendary animals of open range days of a century ago, have not drifted into history, as commonly believed.

The Texas longhorns were and are a tough and pugnacious breed that declared their independence from man at least two centuries before America declared independence from England. Even after the Civil War they acted as though President Lincoln's Emancipation Proclamation included them as well as the slaves, and mightily resisted efforts of the Texas ranchers to round them up and return them to some semblance of domesticated animals. While they were forced into a semidomesticated state, they never completely lost their animosity towards man, nor did they lose their inherent ability to prosper where shorthorn cattle would starve. Indeed, it was partially due to the critter's ornery

nature that eventually led to their becoming unpopular as beef cattle, and therein hangs the tale of the decline of the longhorns as beef cattle.

The Texas longhorns are survivors from very ancient Asiatic stocks mixed with Spanish and Portuguese breeds. They are not one separate breed, but a composite of about 60 breeds from the Iberian Peninsula, Spain and Portugal.

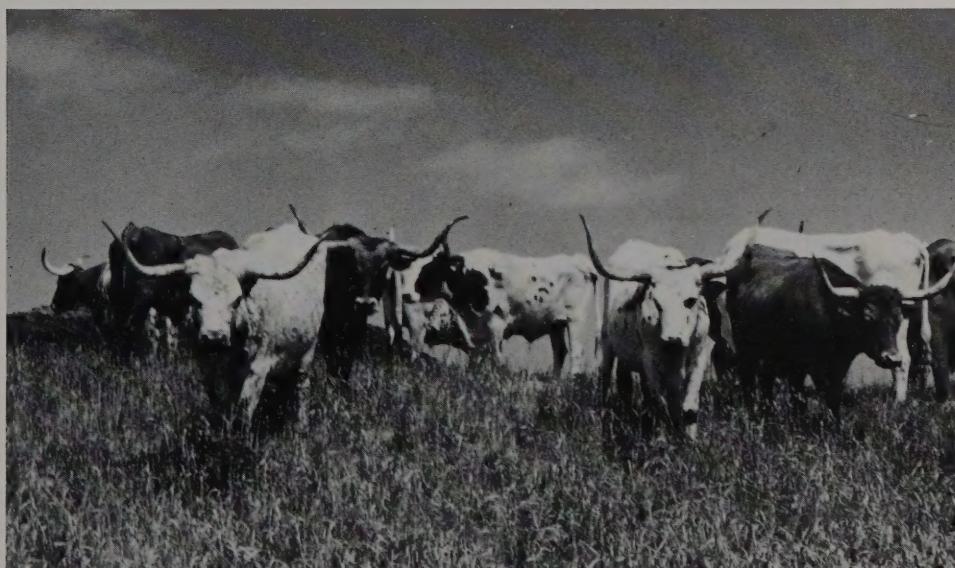
Spaniards and Portuguese started many of their cattle breeds after 711 A.D. when the Arabs crossed the Strait of Gibraltar and brought cattle of an unknown origin, during the Moors' conquest of Spain. From 711 A.D. until early in the 16th century, various breeds of cattle developed throughout the Iberian peninsula. These breeds can be lumped under a general classification of Moroccan-Iberian cattle.

## Spanish Explorers

The earliest Spanish explorers brought Moroccan-Iberian cattle with them for food on their expeditions in the New World. Later, Spanish settlers brought other breeds and the intermingling of herds soon eliminated the Moroccan-Iberian bloodlines. Many cattle escaped in Central America, became wild or feral, and drifted up from Central Mexico, reaching the states of Sonora, Chihuahua, and Coahuila by the middle of the 17th century.

## The Texas Longhorn Evolves

Longhorn cattle in the Americas date back to 1521 when Gregorio de Villabos was sent as viceroy to "New Spain" and brought a number of calves from Santo Domingo. Early explorers, including Coronado, brought cattle from Mexico into what is now Arizona, New Mexico and Texas.



*Uniquely American, but with European ancestors, longhorn cattle symbolized the Old West. The breed is regaining popularity because of its genetic qualities.*

*Leslie's magazine of July 27, 1878 carried this wood engraving of a sketch by Edward Rapier with the caption, "Raising supplies of meat for foreign markets—A herd of Texas Long-Horns being driven to the cattle rendezvous, Dodge City, Kansas."*



These and other importations were the foundation stocks of the Texas longhorns, and ultimately the stocks of the old western cattle states of Colorado, Wyoming, Montana, the Dakotas, Nebraska, Kansas and western Canada.

The first longhorns were driven to a mission near the Sabine River. The year was 1690, and the herd included about 200 cattle that roamed the area later to become the state of Texas. Almost two centuries later, millions of longhorns ranged between the banks of the Rio Brava River and the Sabine River. Most of these cattle were unbranded. They were survivors of Indian raids, scattered by stampedes and weather, escaped from missions or abandoned after ranch failures. Many Texas cattlemen left their ranches to fight in the Civil War, so hundreds of thousands of unattended longhorns left to join the feral herds.

#### Cattle Drives

When the Texas ranchers returned from the Civil War there were literally millions of longhorns scattered throughout southern Texas.

There was no market in Texas, but there was a booming market in the Northeast and East. The problem was getting the beef to market. The nearest railroad, the Kansas Pacific, which by 1867 had been extended to Abilene, Kansas, was about 800 miles away. The only solution was to drive the longhorns to the rail yards. Thus was born the romantic legend of the western cowboy and the historical trail drives—a legend that flourishes strongly even today.

Trail drives were long and arduous for the cowboys and filled with hazards of stampedes, Indian attacks, tornadoes, range fires, blizzards, and floods. The longhorns were pushed hard. Adequate grass and water were often miles apart. Only the strongest survived trail drives.

The first trail herd went north in 1867, and cattle were shipped East as soon as they reached the railheads. However, it was soon discovered that Wyoming, Colorado, parts of North and South Dakota, Montana, and Nebraska were ideal cattle ranges. Herds were driven farther north and east onto the plains, prairies and into

the foothill country of the Rocky Mountains. It has been estimated that 100 million cattle were driven north from Texas to establish a new industry in the West.

#### Texas Longhorn Nears Extinction

The Texas longhorns soon came under disfavor from eastern markets. Their meat was leaner and tougher than other beef, and cattle market workers disliked handling the half-wild beasts with their long sharp horns. Consequently, the longhorn was quickly crossbred with shorthorn and Hereford bulls to upgrade the quality of the beef. This was particularly prevalent in Wyoming where 11 British and Scottish cattle raising companies virtually controlled the state's cattle industry.

Eventually, the majority of cattle raised in both the West and the old southwest were of the shorthorn and Hereford stock, and Brahma cattle were also introduced to produce cattle that were more resistant to Texas tick fever. The longhorn era came to an end when imported cattle with quick maturing characteristics were brought in to improve beef.

qualities. Intensive crossbreeding had nearly erased the true, typical longhorn by the early 1900s.

By 1920 it became apparent that only prompt action could save them from extinction. Through a special congressional appropriation, funds were made available for an intensive effort to save them. Two Forest Service employees, Will C. Barnes and John H. Hatton, armed with descriptions of the typical longhorn, set forth on a 5,000 mile search. After inspecting more than 30,000 Texas cattle, the researchers found 220 cows, three bulls, three steers, and four calves with distinct longhorn characteristics. In August 1927, they were shipped to the Wichita Mountains Wildlife Refuge.

It was the purpose of the Forest Service, continued by the U.S. Fish and Wildlife Service, to secure animals with typical longhorn traits and to develop the herd to represent the original longhorns as closely as possible.

Texas formed its own herd, and gradually more breeders started raising private stock as they

recognized the value of the Texas longhorn.

Dr. Stewart Fowler, former Resident Director of Research at the Texas A & M Research Center, and now Head of the Agriculture Research Department at Berry College in Georgia, summed up the value of longhorns: "The Texas longhorn was fashioned entirely by nature right here in North America. Stemming from ancestors that were the first cattle to set foot on American soil almost 500 years ago, it became the sound end product of survival of the fittest. Shaped by a combination of natural selection and adaption to environment, the Texas longhorns are the only cattle bred in America, without the aid of man. . . Thus, the reservoir of genetic material in the Texas longhorn represents a valuable resource, it becomes increasingly valuable as your human population bites off increasing amounts of productive land, as our grain supply moves into international trade, and as farm and ranch labor becomes less available."

The Texas Longhorn Breeders

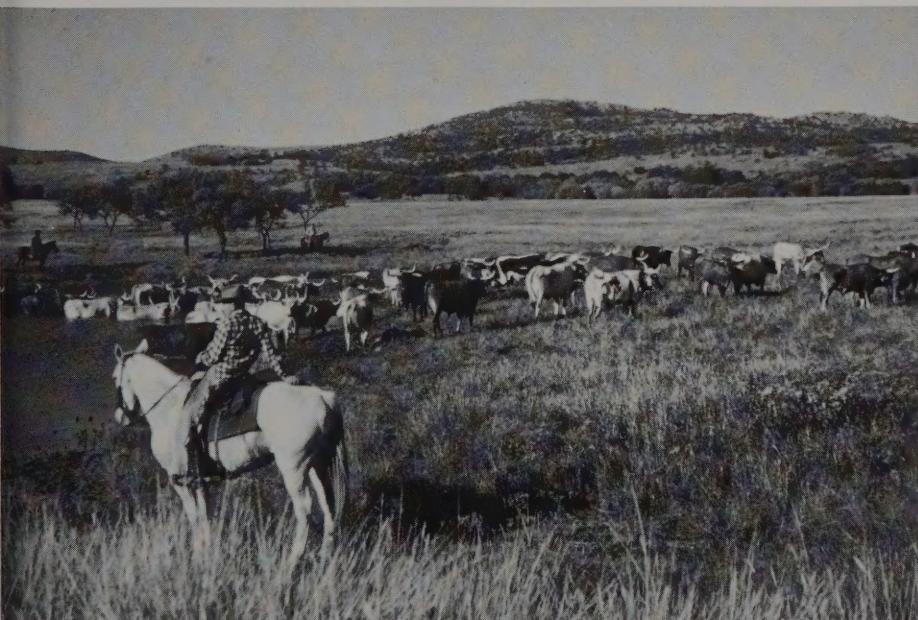
Association of America was formed in Lawton, Oklahoma in 1964. The purpose of the Association is to recognize the Texas longhorn and its link with American history, to promote good breeding practices, to encourage others to develop and maintain herds, and to preserve this magnificent animal for posterity.

Dr. Fowler writes, "As the world's expanding population requires more of the productive land be used for growing grain, soybeans and other food crops for direct human consumption, beef cattle will be forced to marginal lands. This means that cattle must be able to utilize native grasses and browse to the fullest extent possible. As fashioned by nature, Texas longhorns are constitutionally capable of using such marginal lands."

The first longhorns shipped East were simply rounded up and driven North. Weight was not a factor, and they were sold on a per animal basis. They hoofed it all the way from south of San Antonio, Texas to Abilene or Dodge City, Kansas, often without food or water for long stretches. What breed of cattle could have been expected to produce anything except lean, tough or stringy beef under such conditions?

The Texas longhorn has been pictured as a lean, big-boned animal, long on horn and short on beef. However, given favorable grazing range and an opportunity to get all it wants to eat, a longhorn tends to lose that lean and hungry look.

Although the days of millions of longhorns are gone, there is growing evidence that the longhorn cattle may well appear again in sufficient numbers to remind us that their forebears were part of early western American history, as well as the foundations of the present cattle industry. They also may serve to remind us never to judge a book by its cover. ▽



*This herd of longhorns, part of the open-range heritage of a century ago, is maintained on the Wichita Mountains Wildlife Refuge, Cache, Oklahoma.*

*Don Mendehall is retired and lives in Missoula, Montana.*

# Flying Saucers

By Alan Munhall

**T**hree flying saucers landed in the Bureau of Land Management's Lakeview District.

They weren't ordinary flying saucers from outer space with extraterrestrial creatures as passengers. Rather, they were fiberglass discs, 16 feet in diameter, that were transported by helicopter and designed for catching rainwater to quench the thirst of high-desert creatures.

In addition to the three flying saucers that were installed in remote, roadless areas, two others were hauled by truck to locations where usual water supplies for wildlife were lacking. All were installed by the Bureau of Land Management (BLM) with the help of volunteers and the Oregon Department of Fish and Wildlife.

Use of the new-style guzzlers represents an innovative approach to the need to provide water for desert wildlife. Each unit can catch and store 990 gallons of water, thereby improving the habitat for a wide variety of wildlife.

When most people think of Oregon, they picture vast stands of timber, fast-flowing mountain streams, and beautiful ocean vistas. But two-thirds of the state is quite dry, with many areas receiving less than 10 inches of moisture each year. This precipitation range rivals many of the driest deserts of the nation. Throughout this area, water is a limiting factor to many uses of the public land.

## Water Development

While stockmen and recreationists can bring in their own water, wildlife usually must make do with what is naturally available. Resource managers, however, can improve this situation through water development. Wildlife, as well as other rangeland users, benefits from many types of water developments, such as lakebed pits, reservoirs, wells, springs, and water catchments. But water catchments or guzzlers are often the preferred choice for wildlife water development. Guzzlers can be installed almost anywhere as they are not dependent upon an existing water source, such as drainage channels or springs.

Most water developments are dependent on seasonal water supplies. Pits, reservoirs, and springs can fail in critical times of summer. Droughts can then produce devastating effects. Although guzzlers are not immune to drought, they are covered and therefore lose less water to evaporation than other water development types. If necessary, water can be hauled to the guzzlers to refill them. In the past, most guzzlers were composed of a rain collection apron, storage tank, and a drinking trough operated by a float valve. While effective, these guzzlers had several drawbacks; they required yearly maintenance, produced a visible impact, and required mechanized equipment to install.

## Volunteers

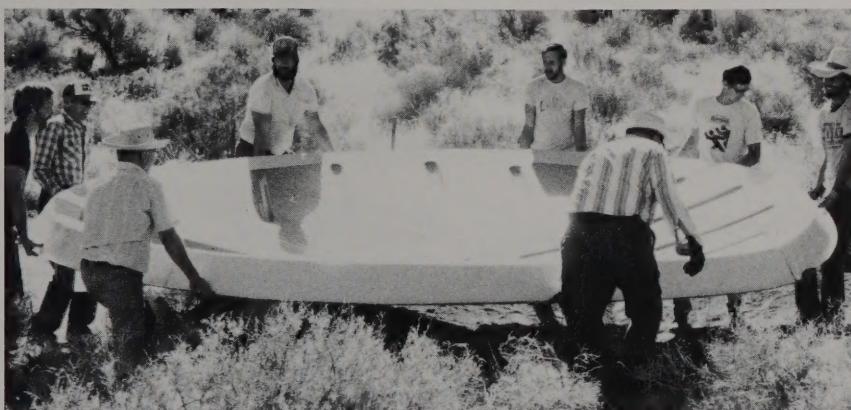
The saucer guzzlers in the Lakeview District required no heavy equipment for actual installation. Volunteers, using picks and shovels, prepared concave sites where the saucers were to be placed. The volunteers were members of Explorer Post 869 and the Izaak Walton League from Eugene, Oregon. Six volunteers can install a unit in about three hours.

Built by Fiber Erectors of Red Bluff, California, the new units have no moving parts, no pipes, and are almost maintenance free. Their light weight is a plus in locating the guzzlers where they will be of most value to wildlife. Their low profile and tan color blend well with the desert environment and reduce visual intrusion.

The flying-saucer guzzlers are about 16 feet in diameter. They consist of a lower, concave saucer which is set about 18 inches into the ground, and an upper, convex saucer which forms a lid over the other one. Each half of the unit consists of four quadrants which are bolted together. The strong lid of the guzzler, two inches smaller in diameter than the bottom, allows rain water and melted snow to flow into the bottom where it collects and is stored. The lid also captures water from dew and frost.

Four openings in the lid allow wildlife access to the stored water. Three 12-inch openings serve smaller animals, like mice, song birds, and chuckar partridges. A larger 14-inch opening—located over the trough built into the bottom half of the guzzler—allows access for larger animals such as deer and bighorn sheep. Rough surfaces permit small animals to escape from the trough.

While the guzzlers are strong, they cannot support the weight of a cow without breaking. To prevent this and to keep cattle from depleting guzzler water, the units



*Pairs of fiberglass saucers have been installed in the high desert of south-central Oregon to form water guzzlers for bighorn sheep and other wildlife. Volunteers from the Izaak Walton League and Explorer Post 869 of Eugene helped prepare the site, bolt sections together, and put the saucers in place to form a 900-gallon, rain-charged reservoir. This project is one of many in cooperation with the Oregon Department of Fish and Wildlife undertaken by the Bureau of Land Management to balance rangeland resource uses.*

are fenced to exclude livestock but still allow wildlife use.

Another plus for the fiberglass saucers is the ease of repair. All that is needed is a little fiberglass and resin, should a thoughtless shooter use the wildlife water source for target practice. Such vandalism may prove to be the greatest detriment to wildlife. Local wildlife becomes dependent on the water supplied by the guzzler. If the stored water is lost, the animals must go elsewhere in search of a new water supply. Once an animal leaves its home range, it becomes more susceptible to predation and the other hazards of a new environment.

#### **Many Species Benefit**

Even though the saucer guzzlers have not yet been through the most critical period from June to October in the high desert area of Oregon, they already are being used. Numerous deer and bighorn sheep tracks have been seen around the new water sources. Guzzlers provide water for many species of wildlife such as deer, pronghorn antelope, bighorn sheep, coyotes, chuckar and Hungarian partridge, quail, reptiles, and many other small animals and birds. Location of the guzzlers dictates which species of wildlife will use them the most.

The five Lakeview area units were located principally to improve and expand bighorn sheep habitat. Ten bighorn sheep were released from 1974 to 1977 in the area where the guzzlers were installed—an area where no bighorn sheep had lived since the early 1900s. Now 100 bighorns use the area.

This is a case where modern technology and ingenuity have helped restore environmental conditions beneficial to wildlife and other rangeland uses as well. ▽

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*Alan Munhall is a wildlife biologist in the Warner Lakes Resource Area of BLM's Lakeview District in Oregon.*

# Transplanted Pronghorns Benefit

by Mary Plumb

Pronghorn antelope that were transplanted last December from Parker Mountain near Loa in central Utah to other locales will have more room to play in their new homes on the range.

Through the cooperation of the Bureau of Land Management (BLM), the State of Utah's Division of Wildlife Resources (DWR), and local ranchers, nearly 200 pronghorns were trapped and trucked to three other locations in Utah. In the Cisco Desert, 150 were released on the east-central edge of the State; 45 were moved to Cedar Mountain, near Cedar City in the southwest corner; and 43 were released in the 12-mile area near Vernal in northeastern Utah.

DWR first transplanted 129 pronghorns to Parker Mountain 20 years ago. The herd prospered due to the exceptional quality of the habitat there. Since then, more than 1,200 animals have been moved to other areas to start new herds or bolster existing ones.

In contrast to the situation on Parker Mountain, the Cisco herd was sharply reduced after the 1976 drought to a low of 38 animals in 1978.

According to Beverly deGruyter, BLM's wildlife biologist in Moab, the recent transplant will benefit the Cisco herd by providing a higher doe to buck ratio which will increase herd productivity and provide greater genetic variability. The increased population also will



*Pronghorns were herded by helicopter into an enclosure, after which burlap was dropped along the fence to shorten the animals' range of vision and calm them.*

help ensure herd stability in case of drought, disease or severe winters.

According to Norm Bowden, DWR's regional game manager, the trap on Parker Mountain was constructed to avoid injury to the animals. They are rounded up by helicopter and directed into a fenced chute that crests a hill. On the other side of the hill, out of sight of the animals, the chute leads into a round trap constructed of nylon netting on metal hangers, almost like a vertical

trampoline. Once the animals are in this part of the trap, a gate is closed behind them and sheets of burlap are unfurled over the netting, to help settle them down. They are then herded up a ramp into a livestock truck or trailer that is also completely covered by burlap, driven to the designated site and released.

Transplants are done in the early winter because the animals are running in herds of around 35, and most of the does are in the early stages of pregnancy. Accord-



*Pronghorns were moved from an area of high productivity to other areas where populations were low.*

ing to Derris Jones, DWR game biologist who handled the Cisco release, antelope often have twins. If mature bucks are caught in the trap they are usually turned loose, to reduce injury to other captive pronghorns.

The newly transplanted herds will be monitored by BLM and DWR to improve understanding of the science of wildlife transplants and management. BLM will ensure

there is no detrimental competition for forage between the pronghorns and domestic sheep in the area. Being more mobile, pronghorns usually move to steeper and more remote areas, according to Beverly deGruyter.

"There should be no problem with pronghorns competing with sheep operations in the Cisco area because there now is sufficient forage for them both," according

to Pete Christensen, the BLM area manager in Moab. Christensen adds, "We expect there probably will be a stable population in the near future. DWR expects it to be up to a huntable level as soon as there is a surplus of bucks." ▽

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*Mary Plumb is the public affairs specialist in the Bureau of Land Management's Moab District in Utah.*



*From a covered truck, pronghorn antelopes bound toward new homes on the range.*

## SERVICES PROVIDED BY THE BUREAU OF LAND MANAGEMENT

Since 1812, the Bureau of Land Management (BLM) and its predecessor agencies have provided a variety of services to the public. All land west of the first thirteen states was the original public domain. From it, most of the national forest, national park, and national wildlife refuge systems were created. The lands best suited for agriculture passed into private ownership. Congress provided major grants of land to states, colleges, and railroads.

All of the public lands remaining after such transfers are managed by BLM.

Management of these public lands by BLM is decentralized to 12 state offices, which guide the management of the natural resources of the lands in 55 districts and their 154 resource areas.

Specific information about opportunities to enjoy the benefits of BLM lands and resources can best be obtained from the state office or district office responsible for the area of interest.

Most BLM lands are available for a wide variety of recreational activities, including sight seeing, picnicking, camping, hunting, fishing, watching wild horses and other wildlife, boating, skiing, and rock hounding. A map brochure called "Camping on the Public Lands," which lists principal recreation sites, is available from all BLM offices. Limitations on kinds, seasons, or areas of use apply in certain localities.

About 21,000 livestock operators pay grazing fees for the use of BLM rangelands, in accordance with permits and leases issued by district managers.

District managers sell about a billion board feet of timber annually in competitive auctions. Following harvest, the timberlands are promptly reforested and the new stands are carefully tended.

Minerals are made available for public use in several ways. Certain common minerals—like sand, gravel, and rock for road construction—are sold to the users at fair market values.

Locatable minerals—like gold, mercury, uranium, molybdenum, copper, etc.—can be claimed by filing a notice of location in the appropriate county and BLM state office, provided that the federal land is open to location and previous mining claims have not been filed. Records of mining claims are maintained by BLM state offices.

Leasable minerals—like oil, gas, coal, geothermal, nitrates of potassium and sodium, etc.—can be acquired by one of three methods, depending on the circumstance. Lands from which minerals may be extracted may be leased: (1) competitively; (2) over-the-counter on a first come, first served basis; or (3) if the lands have been leased previously, by drawings to select lessees from among those persons whose applications are

considered to have been filed simultaneously. Regardless of the means by which a lease is acquired, royalty payments based on a percentage of the value of the mineral are paid as the mineral is extracted. Information about the availability of mineral leases can be obtained from BLM state offices.

The Federal Land Policy and Management Act of 1976 established the policy that BLM public lands are to be managed under principles of multiple use and sustained yield in accordance with resource management plans developed with public involvement. Harmonious and coordinated management of the various resources is

designed to ensure the productivity of the land and the quality of the environment.

If as a result of land use planning, it is determined that certain parcels of land are surplus to federal needs, title to them may be transferred to other owners. Information about opportunities to purchase such lands may be obtained from BLM state offices. Generally, lands are competitively sold at not less than appraised values.

All Americans benefit either directly from the use of BLM lands and the resources they produce or indirectly from the resource revenues that go to the U.S. Treasury.

### U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

#### STATE OFFICES

##### ALASKA STATE OFFICE

Bureau of Land Management  
701 C Street, Box 13  
Anchorage, AK 99513  
(907) 271-5555

##### ARIZONA STATE OFFICE

Bureau of Land Management  
3707 N. 7th Street  
Phoenix, AZ 85014  
(602) 241-5504

##### CALIFORNIA STATE OFFICE

Bureau of Land Management  
Federal Building, Room E-2841  
2800 Cottage Way  
Sacramento, CA 95825  
(916) 484-4724

##### COLORADO STATE OFFICE

(Also Kansas)  
Bureau of Land Management  
2020 Arapahoe Street  
Denver, CO 80205  
(303) 844-6486

##### EASTERN STATES OFFICE

(States bordering and east  
of Mississippi River)  
Bureau of Land Management  
350 South Pickett Street  
Alexandria, VA 22304  
(703) 235-2840

##### IDAHO STATE OFFICE

Bureau of Land Management  
3380 Americana Terrace  
Boise, ID 83706  
(208) 334-1770

##### MONTANA STATE OFFICE

(Also North Dakota and  
South Dakota)  
Bureau of Land Management  
222 N 32nd Street  
P.O. Box 36800  
Billings, MT 59107  
(406) 657-6561

##### NEVADA STATE OFFICE

Bureau of Land Management  
300 Booth Street  
P.O. Box 12000  
Reno, NV 89520  
(702) 784-5311

##### NEW MEXICO STATE OFFICE

(Also Oklahoma and Texas)  
Bureau of Land Management  
South Federal Place  
P.O. Box 1449  
Santa Fe, NM 87501  
(505) 988-6316

##### OREGON STATE OFFICE

(Also Washington)  
Bureau of Land Management  
825 NE Multnomah Street  
P.O. Box 2965  
Portland, OR 97208  
(503) 231-6274

##### UTAH STATE OFFICE

Bureau of Land Management  
136 East South Temple  
Salt Lake City, UT 84111  
(801) 524-5311

##### WYOMING STATE OFFICE

(Also Nebraska)  
Bureau of Land Management  
2515 Warren Avenue  
P.O. Box 1828  
Cheyenne, WY 82001  
(307) 772-2111

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